REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-31 are pending in the present application with claims 1, 20, 23 and 25 having been amended by the present amendment.

In the outstanding Office Action, claims 1-6, 10-21 and 24-31 were rejected under 35 U.S.C. § 102(e) as anticipated by Jaakkola et al.; claim 22 is rejected under 35 U.S.C. § 103(a) as unpatentable over Jaakkola et al. in view of Raychaudhuri et al.; and claims 7-9 and 23 were indicated as allowable if rewritten in independent form.

Applicants thank the Examiner for the indication of allowable subject matter.

Independent claims 1, 20 and 25 have been amended to include some of the subject matter recited in the allowable claims 7-9 and 23. For example, independent claim 1 has been amended to recite that ATM service is provided corresponding to the virtual channel and MAC instructions are used to modulate the downstream data and to demodulate the upstream data. Independent claim 20 has been amended to recite that the signal processor sets the virtual channel and provides an asynchronous transfer mode service corresponding to the virtual channel, and the controller accesses user modems according to the medium access control instructions (some of the subject matter recited in dependent claim 23), and independent claim 25 has been amended to recite that the processor accesses the modem via MAC instructions and

the data having the ATM cell structure is transmitted via a virtual channel established by the processor.

It is respectfully submitted the applied art does not teach or suggest an ATM service being provided corresponding to the virtual channel as well as MAC instructions being used to modulate the downstream data and demodulate the upstream data nor the features recited in independent claims 20 and 25.

Further, independent claim 14 has not been amended. In more detail, independent claim 14 is directed to a method of establishing a virtual channel by performing a protocol communication from a first physical layer for prescribing wireless access media, to a second physical layer for providing wireless media control, of the customer premises equipment and either the network connection unit or the head-end unit. The method also includes connecting a communication path from one of the network connection unit and the head-end unit to a terminating party by performing a protocol communication between an adaption layer for signal processing to a user network interface layer of the customer premises equipment and one of the network connection unit and the head-end unit processing the data between the terminating party and one of the network connection unit and the head-end unit, and transmitting the data between the terminating party and one of the network connection unit and the head-end unit.

In a non-limiting example, FIG. 4 illustrates a block diagram of a LMDS according to the present invention. With reference to FIG. 4, the block diagram includes a protocol stack configuration having a user plane-D for transmitting user data, a user plane-S for transmitting

LMDS MAC messages, and a control plane for processing a signalling procedure. To perform data service, the virtual channel connection (VCC) should be established between the head-end unit 640 and the network interface unit (NIU) 650 of a CPE by performing protocol communication from the LMDS-PHY layer of the user plane-S to the LMDS-MAC layer of the user plane-S. After establishing the virtual channel connection (VCC), a protocol communication is performed between the SAAL and UNI layers of the head-end unit 640, and the NIU 650 via the control plane, thereby providing a communication path between the head-end unit 640 and a LAN PC terminal 600 via an ATM-LAN gateway 610. Thus, signal processing is completely performed from the NIU 650 to the terminating LAN PC terminal 600. Each LAN PC terminal 600 and 660 can transmit/receive the user data to and from each other via the user plane-D (see page 15, line 13 - page 16, line 5).

Regarding independent claim 14, the outstanding Office Action indicates that Jaakkola discloses these features. However, independent claim 14 recites specific communication between the physical layers to establish a virtual channel and connecting a communication path using a protocol communication between an adaption layer for signal processing to a user network interface layer of the customer premises equipment and one of the network connection and the head-end unit. It is respectfully submitted the details of this claim are not disclosed in Jaakkola.

Accordingly, it is respectfully submitted that independent claims 1, 14, 20 and 25 and each claim patentably define over Jaakkola.

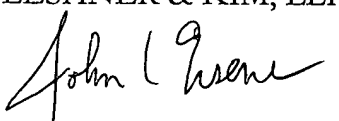
Further, it is respectfully submitted the additional rejection of dependent claim 20 has also been overcome as Raychaudhuri also does not teach or suggest the above-noted features.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **John C. Eisenhart**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP



John C. Eisenhart
Registration No. 38,128

P.O. Box 221200
Chantilly, Virginia 20153-1200
703 766-3701 DYK:JCE/par
Date: May 25, 2004
Please direct all correspondence to Customer Number 34610